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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,151	09/25/2003	William E. Wall	A-8839	4560
5642 7590 09/21/2007 SCIENTIFIC-ATLANTA, INC. INTELLECTUAL PROPERTY DEPARTMENT 5030 SUGARLOAF PARKWAY LAWRENCEVILLE, GA 30044			EXAMINER LUONG, ALAN H	
			ART UNIT 2609	PAPER NUMBER
			NOTIFICATION DATE 09/21/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOmail@sciatl.com

Office Action Summary

Application No.

10/671,151

Applicant(s)

WALL ET AL.

Examiner

ALAN LUONG

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☒ Claim(s) 5-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 5-6 are objected to because of the following informalities: at line 5 of claim 5 and line 3 of claim 6; "DCT" is believed to be intended as "DHCT" and the spelling should be corrected as such. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims **1-4** are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 7,190,901 (US'901) issued to Farmer et al. in view of US Patent No. 5,481,542 (US'542) issued to Logston et al.

Regarding to claim 1: The US'901 discloses a fiber-to-the-home (FTTH) system, comprising:

at least one digital home communications terminal (DHCT) for receiving forward signals ("In conventional FTTH system, a downstream RF path... for any Set Top Terminals....", see col.2, lines 41-47) and for transmitting reverse RF signals ("...set top terminals may employ RF carriers to transmit upstream information". See US'901' col.3, lines 9-11).

Farmer discloses a single wire return device (SWRD) (" a portion of the return path may be housed in a subscriber optical interface" please see col. 3, lines 12-14) for receiving the reverse RF signals (col. 17 line 66 to col.18, line 8), demodulating the reverse RF signals (col. 18, lines 9-40), and converting the demodulated signals to Ethernet signals ("...the RF packets can be formatted as Ethernet packets." col. 18; lines 41-52)

Farmer further discloses an optical network terminal (ONT) coupled to the SWRD for converting the Ethernet signals to optical signals (".. a digital optical transmitter that converts upstream data packet and RF packet electrical signals into the optical domain." Please see col.17, lines28-31), and for transmitting the optical signals to a headend facility via optical fiber (..the optical signals can be transmitted back to the data service hub"; see col.16, lines 53-57); and

Farmer also discloses a downstream modulator located in the headend facility ("The data service hub can comprise one or more modulators..." col.10, lines 6-8 and Fig. 3) for receiving the optical signals("Upstream optical received from ... can convert the upstream optical signals into the electrical domain." col.11, lines 59-65) and for sending the forward signals (col.10, lines 15-24), but Farmer fails to disclose the downstream modulator having an identification number that is inserted into the forward signals and the reverse RF signals including header information and payload data.

Logston discloses the downstream modulator having an identification number that is inserted into the forward signals (please see col.19, lines 46-61). Also, Logston discloses the reverse RF signals including header information and payload

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data. (" a message cell format...has a 40 bit message cell header and a 384 bit message payload area." col.14 lines38-46 and Fig.5A, 5B and 5C). Logston further discloses wherein the at least one DHCT inserts the received modulator identification number in the reverse header information, and wherein the SWRD converts the modulator identification number into an Internet Protocol address indicative of the modulator identification number. (see col.19, lines 18-62 and Fig. 5).

Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to couple the downstream modulator having an identification number that is inserted into the forward signals, and modifying the header information and payload data as taught by Logston, in order to couple the header information and payload data into the reversed RF signals in the DHCT wherein the SWRD converts the modulator identification number into an Internet Protocol address indicative of the modulator identification number .

Regarding to claim 2: Farmer discloses the FTTH system of claim 1, the SWRD comprising:

a diplex filter coupled for filtering forward signals and the reverse RF signals; (col.18, lines 2-9 and Fig. 7 block 507))

an upstream demodulator coupled to the diplex filter for demodulating the reverse RF signals;(col. 4, lines 5-25)

a microprocessor for converting the demodulated signals to Ethernet signals (col. 17, lines 42-65 and Fig. 7 block 550); and

a switch for receiving the Ethernet signals and any additional signals from a second source, the switch for combining the signals and for providing a combined signal to the ONT. (col. 3, lines 34-40 and col. 18 line 63 to col.19, line 2 and Fig. 7 block 513).

Regarding to claim 3: Farmer discloses the FTTH system of claim 2, wherein the SWRD converts the identification number into the Internet Protocol number via the microprocessor. (col.17, lines 39-54)

Regarding to claim 4: Farmer discloses the FTTH system of claim 1, wherein the ONT (see Fig.7 block 515, 520, 530, 540 and 525) receives the forward signals, wherein the forward signals comprise at least one of a telephone signal, Ethernet signals, data signals, and audio/video signals, (col.16 lines 37-40 and Fig. 7) and wherein the ONT provides the at least one of Ethernet signals, data signals, and audio/video signals to the SWRD and provides the telephone signals to a connected telephone. (col.17, lines 39-54 and Fig. 7 block 555, 560 and 550).

4. Claims **5-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 7,190,901 (US'901) issued to Farmer et al. in view of US Patent No. 5,481,542 (US'542) issued to Logston et al.

Regarding to claim 5: Farmer further discloses a method for transmitting reverse signals in a fiber-to-the-home (FTTH) network, the FTTH network including a forward path and a reverse path, the method comprising the steps of:

generating a reverse RF modulated signal including header information in a

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digital communications terminal (DHCT); (please see col.22 line 66 to col. 23 line4 and Fig. 12 step 1220)

providing the reverse RF modulated signal via coaxial cable to a single wire return device (SWRD); (col.24, lines 47-57 and Fig.13)

demodulating the reverse RF modulated signal to provide a reverse demodulated signal; (col.23, line 47 to col.24 line 25 and Fig.13)

processing the reverse demodulated signal to provide a reverse Ethernet signal; (col.18 lines 41-52 and col.19 lines 41-43, Fig. 7 block 407)

converting the reverse Ethernet signal to a reverse optical signal in an optical network terminal (ONT); (col.23, lines 14-18, and Fig.12 step 1230, 1235); and

receiving the reverse optical signal at a downstream modulator located in a headend facility,(col. 23, lines 16-46 and Fig. 12 steps1240, 1245, 1250, and 1260)

However, Farmer fails to disclose wherein the downstream modulator transmits a forward signal in response to the received reverse optical signal.

Logston discloses " the forward signaling path between the service provider (SP) and Set Top Terminal (STT) is provided via CMC on Ethernet to QPSK modulator...The forward path electrical signal output by QPSK modulator is provided to RF combiner along with video signals..." (US'542 col.8 lines27-44 and Fig. 2 blocks 108, 112, 124 and 128). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify at the headend wherein the downstream modulator transmits a forward signal in response to the received reverse optical signal in order to make 2-ways communication in FTTH system.

Regarding to claim 6:Logston also discloses the FTTH system of claim 5, wherein the downstream modulator includes an identification number that is inserted into signals transmitted in the forward path and stored in the DHCT, and wherein the DHCT inserts the received identification number into the reverse header information prior to transmitting to the SWRD. (US'542 col.19 lines 22-61 and Fig. 5A, 5B and 5C)

Regarding to claim 7:Logston further discloses the FTTH system of claim 6, wherein the SWRD converts the identification number into an Internet Protocol address that is indicative of the identification number. (col. 19 lines 44-61 and Fig.5A, 5B and 5C).

Regarding to claim 8. Farmer also teaches the FTTH system of claim 5, the method comprising the further steps of:

receiving the forward signals at the ONT, wherein the forward signals comprise at least one of a telephone signal, Ethernet signals, data signals, and audio/video signals, and wherein the ONT provides the at least one of Ethernet signals, data signals, and audio/video signals to the SWRD and provides the telephone signals to a connected telephone. (col.16, lines37-60 and Fig. 7).

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140

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F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-3 and 5-7 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 4-6 and 9-11 of copending Application No. 10/821476. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims in application are the same subject matter to the claims in the copending application although the claims in application are broader than the claims in copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALAN LUONG whose telephone number is (571) 270-5091. The examiner can normally be reached on Mon.-Thurs., 8:00am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dennis Chow can be reached on (571) 272-7767. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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8/30/2007
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